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TABLES FOR COMPUTING THE SPECTRUM OF THE PARTICLES OF A DISPERSED SYSTEM FROM ITS TRANSPARENCY

by K. S. Shifrin, A. Ya. Perel'man,
and L. K. Potekhina

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Translation of "Tablitsy dlya rascheta spektra chashtits
dispersnoy sistemy po yeye prozrachnosti."

Trudy Glavnay Geofizicheskoy Observatorii imeni A. I. Voyeykova,
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TABLES FOR COMPUTING THE SPECTRUM OF THE PARTICLES OF A DISPERSED
SYSTEM FROM ITS TRANSPARENCY

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ABSTRACT

Equations are presented for calculating the spectrum of the particles of a dispersed system from data on its transparency, together with detailed tables for the special functions used in the problem.

The calculation of the spectrum of particles of a dispersed system $f(r)$ consisting of various spherical particles with radius r from data on its transparency is carried out by means of the following equation:

$$f(r) \simeq \frac{-1}{2\pi^2 a^2 r_0^4} \left[\sum_{j=1}^n g\left(\frac{x_j}{2}\right) \omega(ax_j) \Delta x_j + c_0 \tau \omega_0(a\tau) + c_2 \frac{\omega_2(a\tau)}{\tau} \right]. \quad (1)$$

Here we introduce the following designations:

(1) r_0 is the scale of length, a is a dimensionless radius,

$$r = ar_0; \quad (2)$$

(2) $g\left(\frac{x}{2}\right)$ and x are dimensionless polydispersive coefficient of transparency and the dimensionless wave number, respectively. These quantities are associated with the experimental transparency coefficients $g^*(v^*)$, which describe the spectral transparency of the investigated dispersive system, and with the wavenumber v^* by the following relations:

$$g\left(\frac{x}{2}\right) = r_0 g^*(v^*), \quad x = 2\beta v^* r_0, \quad (3)$$

where

$$v^* = \lambda^{-1}, \quad \beta = 2\pi(m - 1), \quad (4)$$

where λ is the wavelength, and m is the refraction coefficient.

(3) The coefficients C_0 and C_2 are determined by means of the empirical equation which has the form

$$g\left(\frac{x}{2}\right) = c_0 + \frac{c_2}{x^2} \quad (5)$$

by processing the data on transparency (e.g., using the method of averages) along the region where the curve $g\left(\frac{x}{2}\right)$ drops off.

(4) n is the number of points at which the transparency is measured; the sum in equation (1) occurs due to the replacement of the integral by a quadrature equation for rectangles.

(5) τ is a dimensionless quantity given by equation

$$\tau = 2\beta\tau^* r_0, \quad (6)$$

where τ^* designates the length of the interval of wave numbers ν^* , in which the values of the polydispersive scattering coefficient $g^*(\nu^*)$ were measured. This interval $0 < \nu^* < \tau^*$ must contain all the clear maxima $g^*(\nu^*)$.

(6) In case of distributions which have the nature of gamma distributions, the minimum wave interval in which the transparency must be measured is determined by the relations:

$$\lambda_{\min} = \frac{2\beta r_0}{\tau}, \quad \lambda_{\max} = \frac{2\beta r_0}{\sigma}.$$

Here r_0 is the distribution mode, $\tau \approx 4$, $\sigma \approx 0.4$.

(7) The functions $\omega(y)$, $\omega_0(y)$ and $\omega_2(y)$ are given by the equations

$$\begin{aligned} \omega(y) &= y \sin y + \cos y - 1, \quad \omega_0(y) = \cos y - 2 \frac{\sin y}{y} + 1, \\ \omega_2(y) &= \cos y - 1. \end{aligned} \quad (7)$$

We present detailed tables of functions $\omega(y)$, $\omega_0(y)$ and $\omega_2(y)$, which make it substantially easier to carry out the calculations by means of equation (1).

The functions $\omega_0(y)$ and $\omega_2(y)$ are tabulated for the values of y equal to 0 (0.1) 24, while the function $\omega(y)$ is tabulated for values of $y = 0$ (0.01) 24.2 (0.04) 48. In this case instead of $\omega_2(y)$ the tables contain the values $\omega_2(y) \approx 0$.

We note that in using these tables we can avoid interpolation, e.g., in computing the spectrum $f(r)$ with constant interval Δr , which is a multiple of $0.05 r_0$. For this purpose r^* must be selected such that r is equal to a whole number, while the quantity of nodes n in equation (1) must be taken as a multiple of 10.

TABLE OF FUNCTIONS $\omega_0(y)$ AND $\omega_2(y)$.

y	$\omega_0(y)$	$-\omega_2(y)$	y	$\omega_0(y)$	$-\omega_2(y)$
0	0,00000	0,00000	5,9	2,05422	0,07252
0,1	-0,00166	0,00500	6,0	2,05331	0,03983
0,2	-0,00663	0,01993	6,1	2,04299	0,01673
0,3	-0,01478	0,04466	6,2	2,02334	0,00346
0,4	-0,02604	0,07894	6,3	1,99452	0,00014
0,5	-0,04014	0,12242	6,4	1,95676	0,00682
0,6	-0,05678	0,17466	6,5	1,91039	0,02341
0,7	-0,07578	0,23516	6,6	1,85583	0,04977
0,8	-0,09669	0,30329	6,7	1,79354	0,08562
0,9	-0,11911	0,37839	6,8	1,72408	0,13060
1,0	-0,14264	0,45970	6,9	1,64807	0,18427
1,1	-0,16678	0,54640	7,0	1,56618	0,24610
1,2	-0,19104	0,63764	7,1	1,47921	0,31545
1,3	-0,21490	0,73250	7,2	1,38789	0,39165
1,4	-0,23781	0,83003	7,3	1,29308	0,47392
1,5	-0,25924	0,92926	7,4	1,19665	0,56145
1,6	-0,27866	1,02920	7,5	1,09650	0,65336
1,7	-0,29551	1,12884	7,6	0,99654	0,74874
1,8	-0,30926	1,22720	7,7	0,89671	0,84663
1,9	-0,31939	1,32329	7,8	0,79792	0,94604
2,0	-0,32545	1,41615	7,9	0,70110	1,04600
2,1	-0,32695	1,50485	8,0	0,60716	1,14550
2,2	-0,32350	1,58850	8,1	0,51698	1,24354
2,3	-0,31472	1,66628	8,2	0,43141	1,33915
2,4	-0,30027	1,73739	8,3	0,35122	1,43138
2,5	-0,27992	1,80114	8,4	0,27723	1,51929
2,6	-0,25343	1,85689	8,5	0,21011	1,60201
2,7	-0,22065	1,90407	8,6	0,15048	1,67872
2,8	-0,18150	1,94222	8,7	0,09090	1,74865
2,9	-0,13596	1,97096	8,8	0,05597	1,81109
3,0	-0,08407	1,98999	8,9	0,02198	1,86544
3,1	-0,02596	1,99914	9,0	-0,00271	1,91113
3,2	0,03819	1,99829	9,1	-0,01784	1,94772
3,3	0,10812	1,98748	9,2	-0,02330	1,97484
3,4	0,18352	1,96680	9,3	-0,01899	1,99223
3,5	0,26398	1,93646	9,4	-0,00497	1,99969
3,6	0,34908	1,89676	9,5	0,01865	1,99717
3,7	0,43830	1,84810	9,6	0,05163	1,98469
3,8	0,53107	1,79097	9,7	0,09368	1,96236
3,9	0,62677	1,72593	9,8	0,14437	1,93043
4,0	0,72476	1,65364	9,9	0,20325	1,88919
4,1	0,82434	1,57482	10,0	0,26973	1,83907
4,2	0,92478	1,49026	10,1	0,34335	1,78045
4,3	1,02532	1,40080	10,2	0,42312	1,71414
4,4	1,12521	1,30733	10,3	0,50840	1,64068
4,5	1,22366	1,21080	10,4	0,59839	1,56083
4,6	1,31989	1,11215	10,5	0,69221	1,47537
4,7	1,41311	1,01239	10,6	0,78895	1,38517
4,8	1,50256	0,91250	10,7	0,88771	1,29111
4,9	1,58751	0,81349	10,8	0,98751	1,19415
5,0	1,66722	0,71634	10,9	1,08740	1,09524
5,1	1,74104	0,62202	11,0	1,18643	0,99539
5,2	1,80830	0,53148	11,1	1,28362	0,89558
5,3	1,86843	0,44563	11,2	1,37803	0,79681
5,4	1,92089	0,36531	11,3	1,46876	0,70008
5,5	1,96523	0,29133	11,4	1,55494	0,60634
5,6	2,00103	0,22443	11,5	1,63571	0,51653
5,7	2,02793	0,16529	11,6	1,71028	0,43156
5,8	2,04572	0,11448	11,7	1,77798	0,35226

Note: Commas represent decimal points in these tables.

y	$\omega_0(y)$	$-\omega_2(y)$	y	$\omega_0(y)$	$-\omega_2(y)$
11,8	1,83808	0,27944	17,9	1,67319	0,41765
11,9	1,89004	0,21382	18,0	1,74401	0,33941
12,0	1,93335	0,15605	18,1	1,80750	0,26776
12,1	1,96759	0,10671	18,2	1,86302	0,20342
12,2	1,99240	0,06630	18,3	1,90999	0,14705
12,3	2,00756	0,03522	18,4	1,94800	0,19920
12,4	2,01290	0,01378	18,5	1,97663	0,06035
12,5	2,00839	0,00219	18,6	1,99563	0,03089
12,6	1,99407	0,00057	18,7	2,00479	0,01111
12,7	1,97006	0,00894	18,8	2,00402	0,00121
12,8	1,93659	0,02721	18,9	1,99334	0,00129
12,9	1,89400	0,05520	19,0	1,97284	0,01135
13,0	1,84271	0,09263	19,1	1,94273	0,03129
13,1	1,78319	0,13913	19,2	1,90329	0,06091
13,2	1,71605	0,19423	19,3	1,85493	0,09991
13,3	1,64193	0,25737	19,4	1,79814	0,14790
13,4	1,56154	0,32794	19,5	1,73345	0,20441
13,5	1,47567	0,40523	19,6	1,66151	0,26887
13,6	1,38518	0,48846	19,7	1,58304	0,34063
13,7	1,29095	0,57679	19,8	1,49881	0,41898
13,8	1,19386	0,66936	19,9	1,40964	0,50314
13,9	1,09491	0,76523	20,0	1,31642	0,59226
14,0	0,99503	0,86345	20,1	1,22011	0,68545
14,1	0,89523	0,96303	20,2	1,12159	0,78179
14,2	0,79646	1,06298	20,3	1,02188	0,88031
14,3	0,69970	1,16230	20,4	0,92196	0,98002
14,4	0,60588	1,26000	20,5	0,82282	1,07993
14,5	0,51596	1,35510	20,6	0,72543	1,17905
14,6	0,43079	1,44665	20,7	0,63077	1,27637
14,7	0,35120	1,53374	20,8	0,53976	1,37094
14,8	0,27800	1,61550	20,9	0,45332	1,46180
14,9	0,21187	1,69111	20,0	0,37230	1,54804
15,0	0,15351	1,75981	21,1	0,29749	1,62881
15,1	0,10344	1,82092	21,2	0,22965	1,70329
15,2	0,06219	1,87383	21,3	0,16943	1,77075
15,3	0,03016	1,91800	21,4	0,11743	1,83051
15,4	0,00765	1,95301	21,5	0,07419	1,88197
15,5	-0,00511	1,97849	21,6	0,04013	1,92461
15,6	-0,00799	1,99420	21,7	0,01556	1,95802
15,7	-0,00096	1,99997	21,8	0,00074	1,98186
15,8	0,01591	1,99575	21,9	-0,00416	1,99588
15,9	0,04246	1,98158	22,0	0,00088	1,99996
16,0	0,07839	1,95761	22,1	0,01582	1,99404
16,1	0,12342	1,92406	22,2	0,04052	1,97819
16,2	0,17706	1,88128	22,3	0,07472	1,95257
16,3	0,23892	1,82960	22,4	0,11809	1,91743
16,4	0,30815	1,76971	22,5	0,17021	1,87312
16,5	0,38417	1,70213	22,6	0,23156	1,81909
16,6	0,46626	1,62754	22,7	0,29865	1,75875
16,7	0,55360	1,54668	22,8	0,37357	1,68993
16,8	0,64533	1,46035	22,9	0,45471	1,61421
16,9	0,74054	1,36942	23,0	0,54125	1,53236
17,0	0,83831	1,27481	23,1	0,63233	1,44519
17,1	0,93766	1,17744	23,2	0,72707	1,35357
17,2	1,03761	1,07831	23,3	0,82450	1,25842
17,3	1,13719	0,97839	23,4	0,92367	1,16069
17,4	1,23541	0,87869	23,5	1,02359	1,06135
17,5	1,33128	0,78020	23,6	1,12328	0,96140
17,6	1,42390	0,68390	23,7	1,22175	0,86183
17,7	1,51233	0,59077	23,8	1,31800	0,76365
17,8	1,59570	0,50172	23,9	1,40111	0,66782
			24,0	1,50012	0,57532

TABLE OF FUNCTION $\omega(y)$.

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
0	0	0,63	0,17919	1,26	0,50545
0,01	0,00005	0,64	0,18431	1,27	0,50926
0,02	0,00020	0,65	0,18945	1,28	0,51298
0,03	0,00045	0,66	0,19465	1,29	0,51660
0,04	0,00080	0,67	0,19988	1,30	0,52013
0,05	0,00125	0,68	0,20515	1,31	0,52355
0,06	0,00180	0,69	0,21046	1,32	0,52689
0,07	0,00245	0,70	0,21579	1,33	0,53011
0,08	0,00319	0,71	0,22116	1,34	0,53321
0,09	0,00404	0,72	0,22656	1,35	0,53623
0,10	0,00498	0,73	0,23199	1,36	0,53913
0,11	0,00604	0,74	0,23744	1,37	0,54193
0,12	0,00717	0,75	0,24292	1,38	0,54459
0,13	0,00841	0,76	0,24842	1,39	0,54715
0,14	0,00976	0,77	0,25394	1,40	0,54960
0,15	0,01119	0,78	0,25947	1,41	0,55191
0,16	0,01272	0,79	0,26503	1,42	0,55411
0,17	0,01434	0,80	0,27060	1,43	0,55617
0,18	0,01606	0,81	0,27617	1,44	0,55812
0,19	0,01788	0,82	0,28176	1,45	0,55993
0,20	0,01980	0,83	0,28736	1,46	0,56162
0,21	0,02181	0,84	0,29296	1,47	0,56316
0,22	0,02391	0,85	0,29857	1,48	0,56457
0,23	0,02611	0,86	0,30418	1,49	0,56585
0,24	0,02839	0,87	0,30980	1,50	0,56698
0,25	0,03076	0,88	0,31540	1,51	0,56797
0,26	0,03321	0,89	0,32100	1,52	0,56881
0,27	0,03579	0,90	0,32661	1,53	0,56952
0,28	0,03844	0,91	0,33219	1,54	0,57007
0,29	0,04117	0,92	0,33777	1,55	0,57045
0,30	0,04400	0,93	0,34334	1,56	0,57071
0,31	0,04690	0,94	0,34890	1,57	0,57080
0,32	0,04990	0,95	0,35443	1,58	0,57072
0,33	0,05297	0,96	0,35898	1,59	0,57062
0,34	0,05614	0,97	0,36544	1,60	0,57011
0,35	0,05939	0,98	0,37091	1,61	0,56957
0,36	0,06272	0,99	0,37636	1,62	0,56886
0,37	0,06613	1,00	0,38177	1,63	0,56798
0,38	0,06961	1,01	0,38716	1,64	0,56693
0,39	0,07318	1,02	0,39252	1,65	0,56572
0,40	0,07683	1,03	0,39784	1,66	0,56430
0,41	0,08055	1,04	0,40312	1,67	0,56274
0,42	0,08426	1,05	0,40836	1,68	0,56100
0,43	0,08822	1,06	0,41357	1,69	0,55908
0,44	0,09216	1,07	0,41872	1,70	0,55698
0,45	0,09619	1,08	0,42385	1,71	0,55471
0,46	0,10027	1,09	0,42892	1,72	0,55224
0,47	0,10443	1,10	0,43393	1,73	0,54959
0,48	0,10864	1,11	0,43889	1,74	0,54675
0,49	0,11294	1,12	0,44379	1,75	0,54373
0,50	0,11730	1,13	0,44864	1,76	0,54050
0,51	0,12171	1,14	0,45343	1,77	0,53710
0,52	0,12620	1,15	0,45816	1,78	0,53352
0,53	0,13074	1,16	0,46283	1,79	0,52971
0,54	0,13535	1,17	0,46743	1,80	0,52573
0,55	0,14000	1,18	0,47196	1,81	0,52154
0,56	0,14473	1,19	0,47642	1,82	0,51715
0,57	0,14949	1,20	0,48081	1,83	0,51255
0,58	0,15431	1,21	0,48512	1,84	0,50776
0,59	0,15919	1,22	0,48935	1,85	0,50278
0,60	0,16412	1,23	0,49350	1,86	0,49756
0,61	0,16910	1,24	0,49757	1,87	0,49216
0,62	0,17412	1,25	0,50154	1,88	0,48655

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
1,89	0,48073	2,53	-0,36608	3,17	-2,08963
1,90	0,47468	2,54	-0,38690	3,18	-2,12137
1,91	0,46843	2,55	-0,40797	3,19	-2,15319
1,92	0,46198	2,56	-0,42923	3,20	-2,18507
1,93	0,45530	2,57	-0,45075	3,21	-2,21706
1,94	0,44841	2,58	-0,47248	3,22	-2,24915
1,95	0,44129	2,59	-0,49443	3,23	-2,28127
1,96	0,43396	2,60	-0,51659	3,24	-2,31349
1,97	0,42642	2,61	-0,53896	3,25	-2,34578
1,98	0,41865	2,62	-0,56159	3,26	-2,37810
1,99	0,41065	2,63	-0,58440	3,27	-2,41049
2,00	0,40245	2,64	-0,60746	3,28	-2,44298
2,01	0,39401	2,65	-0,63070	3,29	-2,47547
2,02	0,38535	2,66	-0,65418	3,30	-2,50806
2,03	0,37648	2,67	-0,67784	3,31	-2,54064
2,04	0,36736	2,68	-0,70175	3,32	-2,57330
2,05	0,35802	2,69	-0,72583	3,33	-2,60598
2,06	0,34846	2,70	-0,75014	3,34	-2,63873
2,07	0,33865	2,71	-0,77465	3,35	-2,67148
2,08	0,32863	2,72	-0,79939	3,36	-2,70428
2,09	0,31837	2,73	-0,82429	3,37	-2,73710
2,10	0,30789	2,74	-0,84943	3,38	-2,76994
2,11	0,29718	2,75	-0,87474	3,39	-2,80277
2,12	0,28622	2,76	-0,90025	3,40	-2,83564
2,13	0,27505	2,77	-0,92596	3,41	-2,86852
2,14	0,26363	2,78	-0,95188	3,42	-2,90137
2,15	0,25198	2,79	-0,97798	3,43	-2,93429
2,16	0,24008	2,80	-1,00425	3,44	-2,96717
2,17	0,22795	2,81	-1,03073	3,45	-3,00003
2,18	0,21561	2,82	-1,05739	3,46	-3,03289
2,19	0,20301	2,83	-1,08426	3,47	-3,06577
2,20	0,19020	2,84	-1,11127	3,48	-3,09860
2,21	0,17712	2,85	-1,13847	3,49	-3,13141
2,22	0,16383	2,86	-1,16585	3,50	-3,16419
2,23	0,15028	2,87	-1,19341	3,51	-3,19696
2,24	0,13652	2,88	-1,22116	3,52	-3,22968
2,25	0,12249	2,89	-1,24906	3,53	-3,26236
2,26	0,10824	2,90	-1,27714	3,54	-3,29502
2,27	0,09373	2,91	-1,30537	3,55	-3,32763
2,28	0,07902	2,92	-1,33379	3,56	-3,36020
2,29	0,06405	2,93	-1,36234	3,57	-3,39268
2,30	0,04885	2,94	-1,39107	3,58	-3,42514
2,31	0,03341	2,95	-1,41996	3,59	-3,45751
2,32	0,01771	2,96	-1,44898	3,60	-3,48983
2,33	0,00180	2,97	-1,47818	3,61	-3,52210
2,34	-0,01436	2,98	-1,50752	3,62	-3,55427
2,35	-0,03076	2,99	-1,53701	3,63	-3,58635
2,36	-0,04738	3,00	-1,56663	3,64	-3,61838
2,37	-0,06425	3,01	-1,59641	3,65	-3,65030
2,38	-0,08137	3,02	-1,62632	3,66	-3,68214
2,39	-0,09871	3,03	-1,65636	3,67	-3,71388
2,40	-0,11629	3,04	-1,68652	3,68	-3,74552
2,41	-0,13409	3,05	-1,71636	3,69	-3,77707
2,42	-0,15215	3,06	-1,74728	3,70	-3,80851
2,43	-0,17043	3,07	-1,77784	3,71	-3,83982
2,44	-0,18897	3,08	-1,80853	3,72	-3,87102
2,45	-0,20772	3,09	-1,83932	3,73	-3,90213
2,46	-0,22670	3,10	-1,87024	3,74	-3,93308
2,47	-0,24592	3,11	-1,90126	3,75	-3,96391
2,48	-0,26537	3,12	-1,93241	3,76	-3,99462
2,49	-0,28506	3,13	-1,96365	3,77	-4,02519
2,50	-0,30496	3,14	-1,99501	3,78	-4,05563
2,51	-0,32511	3,15	-2,02645	3,79	-4,08591
2,52	-0,34548	3,16	-2,05801	3,80	-4,11604

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
3,81	-4,14602	4,45	-5,55707	5,09	-5,36271
3,82	-4,17581	4,46	-5,56843	5,10	-5,34365
3,83	-4,20550	4,47	-5,57956	5,11	-5,32415
3,84	-4,23499	4,48	-5,58988	5,12	-5,30410
3,85	-4,26432	4,49	-5,59997	5,13	-5,28355
3,86	-4,29346	4,50	-5,60968	5,14	-5,26249
3,87	-4,32242	4,51	-5,61896	5,15	-5,24094
3,88	-4,35121	4,52	-5,62781	5,16	-5,21883
3,89	-4,37980	4,53	-5,63623	5,17	-5,19625
3,90	-4,40823	4,54	-5,64426	5,18	-5,17317
3,91	-4,43643	4,55	-5,65180	5,19	-5,14958
3,92	-4,46446	4,56	-5,65895	5,20	-5,12542
3,93	-4,49225	4,57	-5,66566	5,21	-5,10085
3,94	-4,51987	4,58	-5,67192	5,22	-5,07572
3,95	-4,54725	4,59	-5,67775	5,23	-5,05006
3,96	-4,57442	4,60	-5,68312	5,24	-5,02394
3,97	-4,60138	4,61	-5,68805	5,25	-4,99729
3,98	-4,62810	4,62	-5,69258	5,26	-4,97018
3,99	-4,65460	4,63	-5,69660	5,27	-4,94254
4,00	-4,68084	4,64	-5,70017	5,28	-4,91442
4,01	-4,70687	4,65	-5,70328	5,29	-4,88578
4,02	-4,73265	4,66	-5,70599	5,30	-4,85666
4,03	-4,75821	4,67	-5,70818	5,31	-4,82700
4,04	-4,78351	4,68	-5,70995	5,32	-4,79686
4,05	-4,80855	4,69	-5,71122	5,33	-4,76625
4,06	-4,83333	4,70	-5,71201	5,34	-4,73515
4,07	-4,85784	4,71	-5,71239	5,35	-4,70355
4,08	-4,88208	4,72	-5,71225	5,36	-4,67148
4,09	-4,90606	4,73	-5,71163	5,37	-4,63886
4,10	-4,92977	4,74	-5,71059	5,38	-4,60580
4,11	-4,95317	4,75	-5,70903	5,39	-4,57226
4,12	-4,97620	4,76	-5,70703	5,40	-4,53821
4,13	-4,99937	4,77	-5,70450	5,41	-4,50373
4,14	-5,02176	4,78	-5,70154	5,42	-4,46875
4,15	-5,04403	4,79	-5,69805	5,43	-4,43326
4,16	-5,06600	4,80	-5,69407	5,44	-4,39734
4,17	-5,08770	4,81	-5,68964	5,45	-4,36092
4,18	-5,10908	4,82	-5,68474	5,46	-4,32404
4,19	-5,13013	4,83	-5,67928	5,47	-4,28665
4,20	-5,15090	4,84	-5,67339	5,48	-4,24882
4,21	-5,17129	4,85	-5,66699	5,49	-4,21054
4,22	-5,19144	4,86	-5,66009	5,50	-4,17180
4,23	-5,21121	4,87	-5,65270	5,51	-4,13260
4,24	-5,23065	4,88	-5,64480	5,52	-4,09295
4,25	-5,24980	4,89	-5,63640	5,53	-4,05284
4,26	-5,26861	4,90	-5,62749	5,54	-4,01226
4,27	-5,28703	4,91	-5,61812	5,55	-3,97123
4,28	-5,30515	4,92	-5,60825	5,56	-3,92980
4,29	-5,32289	4,93	-5,59785	5,57	-3,88789
4,30	-5,34033	4,94	-5,58695	5,58	-3,84552
4,31	-5,35738	4,95	-5,57552	5,59	-3,80274
4,32	-5,37408	4,96	-5,56363	5,60	-3,75954
4,33	-5,39043	4,97	-5,55122	5,61	-3,71588
4,34	-5,40638	4,98	-5,53833	5,62	-3,67180
4,35	-5,42198	4,99	-5,52487	5,63	-3,62731
4,36	-5,43722	5,00	-5,51094	5,64	-3,58240
4,37	-5,45210	5,01	-5,49652	5,65	-3,53707
4,38	-5,46658	5,02	-5,48158	5,66	-3,49127
4,39	-5,48066	5,03	-5,46610	5,67	-3,44515
4,40	-5,49437	5,04	-5,45014	5,68	-3,39856
4,41	-5,50772	5,05	-5,43370	5,69	-3,35155
4,42	-5,52066	5,06	-5,41671	5,70	-3,30422
4,43	-5,53318	5,07	-5,39923	5,71	-3,25641
4,44	-5,54533	5,08	-5,38121	5,72	-3,20823

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
5,73	-3,15968	6,37	0,54857	7,01	4,40536
5,74	-3,11076	6,38	0,61201	7,02	4,45756
5,75	-3,06142	6,39	0,67554	7,03	4,50934
5,76	-3,01170	6,40	0,73910	7,04	4,56076
5,77	-2,96159	6,41	0,80271	7,05	4,61169
5,78	-2,91118	6,42	0,86628	7,06	4,66228
5,79	-2,86033	6,43	0,92987	7,07	4,71244
5,80	-2,80916	6,44	0,99341	7,08	4,76211
5,81	-2,75761	6,45	1,05708	7,09	4,81142
5,82	-2,70575	6,46	1,12066	7,10	4,86024
5,83	-2,65349	6,47	1,18427	7,11	4,90862
5,84	-2,60092	6,48	1,24785	7,12	4,95650
5,85	-2,54797	6,49	1,31135	7,13	5,00395
5,86	-2,49473	6,50	1,37487	7,14	5,05098
5,87	-2,44113	6,51	1,43829	7,15	5,09749
5,88	-2,38720	6,52	1,50175	7,16	5,14356
5,89	-2,33295	6,53	1,56511	7,17	5,18906
5,90	-2,27841	6,54	1,62836	7,18	5,23412
5,91	-2,22350	6,55	1,69159	7,19	5,27867
5,92	-2,16831	6,56	1,75471	7,20	5,32277
5,93	-2,11285	6,57	1,81780	7,21	5,36629
5,94	-2,05706	6,58	1,88079	7,22	5,40937
5,95	-2,00094	6,59	1,94361	7,23	5,45185
5,96	-1,94461	6,60	2,00639	7,24	5,49382
5,97	-1,88794	6,61	2,06908	7,25	5,53525
5,98	-1,83100	6,62	2,13159	7,26	5,57618
5,99	-1,77378	6,63	2,19400	7,27	5,61649
6,00	-1,71635	6,64	2,25629	7,28	5,65636
6,01	-1,65858	6,65	2,31843	7,29	5,69556
6,02	-1,60059	6,66	2,38045	7,30	5,73429
6,03	-1,54233	6,67	2,44231	7,31	5,77235
6,04	-1,48385	6,68	2,50399	7,32	5,80994
6,05	-1,42509	6,69	2,56556	7,33	5,84686
6,06	-1,36612	6,70	2,62688	7,34	5,88325
6,07	-1,30687	6,71	2,68803	7,35	5,91909
6,08	-1,24745	6,72	2,74906	7,36	5,95425
6,09	-1,18782	6,73	2,80986	7,37	5,98887
6,10	-1,12791	6,74	2,87041	7,38	6,02286
6,11	-1,06784	6,75	2,93078	7,39	6,05624
6,12	-1,00754	6,76	2,99096	7,40	6,08900
6,13	-0,94709	6,77	3,05090	7,41	6,12114
6,14	-0,88641	6,78	3,11066	7,42	6,15266
6,15	-0,82552	6,79	3,17010	7,43	6,18354
6,16	-0,76446	6,80	3,22935	7,44	6,21380
6,17	-0,70324	6,81	3,28834	7,45	6,24336
6,18	-0,64186	6,82	3,34709	7,46	6,27236
6,19	-0,58032	6,83	3,40559	7,47	6,30065
6,20	-0,51862	6,84	3,46374	7,48	6,32830
6,21	-0,45676	6,85	3,52173	7,49	6,35533
6,22	-0,39473	6,86	3,57937	7,50	6,38164
6,23	-0,33260	6,87	3,63670	7,51	6,40730
6,24	-0,27031	6,88	3,69376	7,52	6,43225
6,25	-0,20793	6,89	3,75049	7,53	6,45663
6,26	-0,14538	6,90	3,80697	7,54	6,48022
6,27	-0,08273	6,91	3,86310	7,55	6,50315
6,28	-0,02004	6,92	3,91890	7,56	6,52545
6,29	+0,04281	6,93	3,97437	7,57	6,54700
6,30	0,10576	6,94	4,02950	7,58	6,56784
6,31	0,16881	6,95	4,08430	7,59	6,58806
6,32	0,23196	6,96	4,13869	7,60	6,60745
6,33	0,29514	6,97	4,19281	7,61	6,62619
6,34	0,35837	6,98	4,24651	7,62	6,64421
6,35	0,42170	6,99	4,29981	7,63	6,66150
6,36	0,48512	7,00	4,35283	7,64	6,67811

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
7,65	6,69395	8,29	6,09204	8,93	2,36020
7,66	6,70910	8,30	6,05666	8,94	2,28138
7,67	6,72350	8,31	6,02046	8,95	2,20201
7,68	6,73114	8,32	5,98344	8,96	2,12218
7,69	6,75009	8,33	5,94569	8,97	2,04184
7,70	6,76225	8,34	5,90710	8,98	1,96102
7,71	6,77370	8,35	5,86775	8,99	1,87972
7,72	6,78439	8,36	5,82764	9,00	1,79795
7,73	6,79431	8,37	5,78671	9,01	1,71572
7,74	6,80351	8,38	5,74505	9,02	1,63301
7,75	6,81192	8,39	5,70258	9,03	1,54990
7,76	6,81960	8,40	5,65935	9,04	1,46630
7,77	6,82650	8,41	5,61534	9,05	1,38230
7,78	6,83261	8,42	5,57055	9,06	1,29789
7,79	6,83800	8,43	5,52502	9,07	1,21304
7,80	6,84259	8,44	5,47872	9,08	1,12779
7,81	6,84642	8,45	5,43168	9,09	1,04212
7,82	6,84944	8,46	5,38385	9,10	0,95609
7,83	6,85171	8,47	5,33531	9,11	0,86965
7,84	6,85322	8,48	5,28600	9,12	0,78284
7,85	6,85390	8,49	5,23592	9,13	0,69564
7,86	6,85384	8,50	5,18512	9,14	0,60810
7,87	6,85295	8,51	5,13360	9,15	0,52021
7,88	6,85132	8,52	5,08130	9,16	0,43198
7,89	6,84885	8,53	5,02832	9,17	0,34341
7,90	6,84562	8,54	4,97458	9,18	0,25451
7,91	6,84160	8,55	4,92010	9,19	0,16529
7,92	6,83676	8,56	4,86494	9,20	0,07576
7,93	6,83116	8,57	4,80905	9,21	—0,01406
7,94	6,82471	8,58	4,75242	9,22	—0,10421
7,95	6,81751	8,59	4,69510	9,23	—0,19460
7,96	6,80949	8,60	4,63710	9,24	—0,28531
7,97	6,80064	8,61	4,57838	9,25	—0,37625
7,98	6,79102	8,62	4,51895	9,26	—0,46749
7,99	6,78060	8,63	4,45885	9,27	—0,55894
8,00	6,76935	8,64	4,39806	9,28	—0,65065
8,01	6,75730	8,65	4,33660	9,29	—0,74262
8,02	6,74446	8,66	4,27446	9,30	—0,83478
8,03	6,73082	8,67	4,21162	9,31	—0,92715
8,04	6,71635	8,68	4,14815	9,32	—1,01976
8,05	6,70106	8,69	4,08400	9,33	—1,11254
8,06	6,68500	8,70	4,01920	9,34	—1,20552
8,07	6,66810	8,71	3,95372	9,35	—1,29865
8,08	6,65040	8,72	3,88762	9,36	—1,39199
8,09	6,63189	8,73	3,82089	9,37	—1,48545
8,10	6,61255	8,74	3,75351	9,38	—1,57911
8,11	6,59242	8,75	3,68550	9,39	—1,67288
8,12	6,57149	8,76	3,61684	9,40	—1,76679
8,13	6,54974	8,77	3,54761	9,41	—1,86080
8,14	6,52718	8,78	3,47774	9,42	—1,95495
8,15	6,50381	8,79	3,40725	9,43	—2,04922
8,16	6,47961	8,80	3,33619	9,44	—2,14354
8,17	6,45464	8,81	3,26452	9,45	—2,23799
8,18	6,42885	8,82	3,19225	9,46	—2,33250
8,19	6,40225	8,83	3,11941	9,47	—2,42705
8,20	6,37484	8,84	3,04598	9,48	—2,52170
8,21	6,34661	8,85	2,97199	9,49	—2,61636
8,22	6,31761	8,86	2,89741	9,50	—2,71109
8,23	6,28779	8,87	2,82231	9,51	—2,80582
8,24	6,25715	8,88	2,74662	9,52	—2,90060
8,25	6,22574	8,89	2,67042	9,53	—2,99535
8,26	6,19352	8,90	2,59364	9,54	—3,09014
8,27	6,16050	8,91	2,51635	9,55	—3,18490
8,28	6,12666	8,92	2,43856	9,56	—3,27964

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
9,57	-3,37435	10,21	-8,92551	10,85	-11,88030
9,58	-3,46900	10,22	-8,99739	10,86	-11,89551
9,59	-3,56365	10,23	-9,06861	10,87	-11,90965
9,60	-3,65821	10,24	-9,13915	10,88	-11,92271
9,61	-3,75570	10,25	-9,20904	10,89	-11,93474
9,62	-3,84712	10,26	-9,27821	10,90	-11,94568
9,63	-3,94145	10,27	-9,34671	10,91	-11,95555
9,64	-4,03566	10,28	-9,41451	10,92	-11,96431
9,65	-4,12980	10,29	-9,48161	10,93	-11,97202
9,66	-4,22380	10,30	-9,54798	10,94	-11,97866
9,67	-4,31765	10,31	-9,61360	10,95	-11,98419
9,68	-4,41141	10,32	-9,67851	10,96	-11,98861
9,69	-4,50500	10,33	-9,74269	10,97	-11,99198
9,70	-4,59841	10,34	-9,80610	10,98	-11,99424
9,71	-4,69169	10,35	-9,86876	10,99	-11,99540
9,72	-4,78476	10,36	-9,93064	11,00	-11,99545
9,73	-4,87766	10,37	-9,99176	11,01	-11,99441
9,74	-4,97038	10,38	-10,05209	11,02	-11,99229
9,75	-5,06286	10,39	-10,11161	11,03	-11,98904
9,76	-5,15516	10,40	-10,17035	11,04	-11,98470
9,77	-5,24721	10,41	-10,22831	11,05	-11,97924
9,78	-5,33900	10,42	-10,28542	11,06	-11,97266
9,79	-5,43059	10,43	-10,34174	11,07	-11,96500
9,80	-5,52191	10,44	-10,39720	11,08	-11,95621
9,81	-5,61296	10,45	-10,95185	11,09	-11,94631
9,82	-5,70371	10,46	-10,50565	11,10	-11,93530
9,83	-5,79421	10,47	-10,55861	11,11	-11,92315
9,84	-5,88440	10,48	-10,61071	11,12	-11,90991
9,85	-5,97428	10,49	-10,66195	11,13	-11,89556
9,86	-6,06385	10,50	-10,71232	11,14	-11,88010
9,87	-6,15310	10,51	-10,76181	11,15	-11,86351
9,88	-6,24201	10,52	-10,81042	11,16	-11,84580
9,89	-6,33055	10,53	-10,85816	11,17	-11,82695
9,90	-6,41878	10,54	-10,90498	11,18	-11,80701
9,91	-6,50661	10,55	-10,95090	11,19	-11,78595
9,92	-6,59410	10,56	-10,99592	11,20	-11,76379
9,93	-6,68119	10,57	-11,04001	11,21	-11,74050
9,94	-6,76789	10,58	-11,08319	11,22	-11,71608
9,95	-6,85418	10,59	-11,12542	11,23	-11,69056
9,96	-6,94004	10,60	-11,16675	11,24	-11,66391
9,97	-7,02550	10,61	-11,20711	11,25	-11,63616
9,98	-7,11055	10,62	-11,24656	11,26	-11,60728
9,99	-7,19511	10,63	-11,28502	11,27	-11,57730
10,00	-7,27925	10,64	-11,32256	11,28	-11,54620
10,01	-7,36294	10,65	-11,35912	11,29	-11,51400
10,02	-7,44615	10,66	-11,39471	11,30	-11,48068
10,03	-7,52886	10,67	-11,42930	11,31	-11,44626
10,04	-7,61112	10,68	-11,46294	11,32	-11,41070
10,05	-7,69286	10,69	-11,49562	11,33	-11,37409
10,06	-7,77409	10,70	-11,52728	11,34	-11,33635
10,07	-7,85481	10,71	-11,55795	11,35	-11,29751
10,08	-7,93500	10,72	-11,58760	11,36	-11,25755
10,09	-8,01466	10,73	-11,61629	11,37	-11,21651
10,10	-8,09375	10,74	-11,64394	11,38	-11,17440
10,11	-8,17231	10,75	-11,67059	11,39	-11,13116
10,12	-8,25031	10,76	-11,69621	11,40	-11,08684
10,13	-8,32775	10,77	-11,72081	11,41	-11,04144
10,14	-8,40460	10,78	-11,74439	11,42	-10,99496
10,15	-8,48085	10,79	-11,76691	11,43	-10,94741
10,16	-8,55651	10,80	-11,78842	11,44	-10,89874
10,17	-8,63156	10,81	-11,80891	11,45	-10,84904
10,18	-8,70599	10,82	-11,82831	11,46	-10,79825
10,19	-8,77980	10,83	-11,84670	11,47	-10,74638
10,20	-8,85296	10,84	-11,86401	11,48	-10,69345

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
11,49	-10,63946	12,13	-5,22051	12,77	2,56171
11,50	-10,58441	12,14	-5,11026	12,78	2,68671
11,51	-10,52830	12,15	-4,9945	12,79	2,81151
11,52	-10,47114	12,16	-4,88804	12,80	2,93611
11,53	-10,41292	12,17	-4,77604	12,81	3,06055
11,54	-10,35369	12,18	-4,66352	12,82	3,18474
11,55	-10,29340	12,19	-4,55040	12,83	3,30875
11,56	-10,23206	12,20	-4,43678	12,84	3,43249
11,57	-10,16971	12,21	-4,32262	12,85	3,55599
11,58	-10,10635	12,22	-4,20791	12,86	3,67920
11,59	-10,04195	12,23	-4,09272	12,87	3,80216
11,60	-9,97652	12,24	-3,97704	12,88	3,92484
11,61	-9,91011	12,25	-3,86085	12,89	4,04720
11,62	-9,84266	12,26	-3,74421	12,90	4,16925
11,63	-9,77424	12,27	-3,62709	12,91	4,29096
11,64	-9,70481	12,28	-3,50951	12,92	4,41236
11,65	-9,63439	12,29	-3,39149	12,93	4,53338
11,66	-9,56299	12,30	-3,27304	12,94	4,65404
11,67	-9,49060	12,31	-3,15415	12,95	4,77430
11,68	-9,41724	12,32	-3,03489	12,96	4,89421
11,69	-9,34292	12,33	-2,91522	12,97	5,01370
11,70	-9,26761	12,34	-2,79516	12,98	5,13274
11,71	-9,19138	12,35	-2,67472	12,99	5,25140
11,72	-9,11418	12,36	-2,55392	13,00	5,36959
11,73	-9,03604	12,37	-2,43275	13,01	5,48731
11,74	-8,95695	12,38	-2,31126	13,02	5,60460
11,75	-8,87696	12,39	-2,18946	13,03	5,72139
11,76	-8,79600	12,40	-2,06730	13,04	5,83769
11,77	-8,71415	12,41	-1,94489	13,05	5,95346
11,78	-8,63141	12,42	-1,82216	13,06	6,06875
11,79	-8,54774	12,43	-1,69915	13,07	6,18349
11,80	-8,46318	12,44	-1,57585	13,08	6,29769
11,81	-8,37770	12,45	-1,45232	13,09	6,41131
11,82	-8,29139	12,46	-1,32856	13,10	6,52441
11,83	-8,20415	12,47	-1,20455	13,11	6,63690
11,84	-8,11609	12,48	-1,08032	13,12	6,74880
11,85	-8,02715	12,49	-0,95588	13,13	6,86010
11,86	-7,93735	12,50	-0,83125	13,14	6,97078
11,87	-7,84671	12,51	-0,70642	13,15	7,08081
11,88	-7,75520	12,52	-0,58145	13,16	7,19024
11,89	-7,66291	12,53	-0,45631	13,17	7,29900
11,90	-7,56976	12,54	-0,33100	13,18	7,40709
11,91	-7,47581	12,55	-0,20560	13,19	7,51451
11,92	-7,38106	12,56	-0,08004	13,20	7,62121
11,93	-7,28551	12,57	0,04559	13,21	7,72726
11,94	-7,18918	12,58	0,17131	13,22	7,83255
11,95	-7,09204	12,59	0,29714	13,23	7,93716
11,96	-6,99415	12,60	0,42306	13,24	8,04101
11,97	-6,89551	12,61	0,54901	13,25	8,14411
11,98	-6,79610	12,62	0,67501	13,26	8,24645
11,99	-6,69592	12,63	0,80105	13,27	8,34801
12,00	-6,59504	12,64	0,92710	13,28	8,44882
12,01	-6,49342	12,65	1,05316	13,29	8,54881
12,02	-6,39105	12,66	1,17921	13,30	8,64801
12,03	-6,28802	12,67	1,30524	13,31	8,74638
12,04	-6,18425	12,68	1,43125	13,32	8,84391
12,05	-6,07982	12,69	1,55720	13,33	8,94064
12,06	-5,97469	12,70	1,68310	13,34	9,03650
12,07	-5,86889	12,71	1,80892	13,35	9,13150
12,08	-5,76240	12,72	1,93468	13,36	9,22561
12,09	-5,65531	12,73	2,06032	13,37	9,31885
12,10	-5,54755	12,74	2,18588	13,38	9,40121
12,11	-5,43916	12,75	2,31130	13,39	9,50266
12,12	-5,33012	12,76	2,43659	13,40	9,59321

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
13,41	9,68280	14,05	13,08371	14,69	10,97670
13,42	9,77150	14,06	13,09525	14,70	10,89891
13,43	9,85920	14,07	13,10539	14,71	10,81981
13,44	9,94600	14,08	13,11412	14,72	10,73946
13,45	10,03180	14,09	13,12148	14,73	10,65780
13,46	10,11662	14,10	13,12740	14,74	10,57484
13,47	10,20046	14,11	13,13196	14,75	10,49066
13,48	10,28331	14,12	13,13509	14,76	10,40518
13,49	10,36515	14,13	13,13681	14,77	10,31845
13,50	10,44599	14,14	13,13711	14,78	10,23046
13,51	10,52579	14,15	13,13600	14,79	10,14126
13,52	10,60456	14,16	13,13348	14,80	10,05080
13,53	10,68226	14,17	13,12952	14,81	9,95912
13,54	10,75894	14,18	13,12416	14,82	9,86621
13,55	10,83455	14,19	13,11740	14,83	9,77209
13,56	10,90906	14,20	13,10919	14,84	9,67675
13,57	10,98251	14,21	13,09954	14,85	9,58025
13,58	11,05488	14,22	13,08851	14,86	9,48254
13,59	11,12614	14,23	13,07601	14,87	9,38365
13,60	11,19629	14,24	13,06211	14,88	9,28359
13,61	11,26530	14,25	13,04680	14,89	9,18235
13,62	11,33321	14,26	13,03004	14,90	9,07999
13,63	11,40000	14,27	13,01185	14,91	8,97644
13,64	11,46561	14,28	12,99224	14,92	8,87180
13,65	11,53011	14,29	12,97120	14,93	8,76600
13,66	11,59340	14,30	12,94871	14,94	8,65909
13,67	11,65556	14,31	12,92482	14,95	8,55105
13,68	11,71655	14,32	12,89951	14,96	8,44195
13,69	11,77634	14,33	12,87274	14,97	8,33174
13,70	11,83494	14,34	12,84459	14,98	8,22045
13,71	11,89234	14,35	12,81499	14,99	8,10808
13,72	11,94854	14,36	12,78395	15,00	7,99466
13,73	12,00350	14,37	12,75150	15,01	7,88018
13,74	12,05728	14,38	12,71766	15,02	7,76464
13,75	12,10982	14,39	12,68235	15,03	7,64811
13,76	12,16111	14,40	12,64564	15,04	7,53054
13,77	12,21115	14,41	12,60754	15,05	7,41194
13,78	12,25995	14,42	12,56801	15,06	7,29239
13,79	12,30750	14,43	12,52704	15,07	7,17182
13,80	12,35381	14,44	12,48470	15,08	7,05025
13,81	12,39880	14,45	12,44091	15,09	6,92776
13,82	12,44254	14,46	12,39574	15,10	6,80429
13,83	12,48500	14,47	12,34918	15,11	6,67986
13,84	12,52620	14,48	12,30121	15,12	6,55451
13,85	12,56605	14,49	12,25182	15,13	6,42824
13,86	12,60465	14,50	12,20105	15,14	6,30108
13,87	12,64190	14,51	12,14891	15,15	6,17301
13,88	12,67788	14,52	12,09534	15,16	6,04304
13,89	12,71251	14,53	12,04041	15,17	5,91420
13,90	12,74585	14,54	11,98410	15,18	5,78350
13,91	12,77784	14,55	11,92641	15,19	5,65195
13,92	12,80850	14,56	11,86735	15,20	5,51956
13,93	12,83781	14,57	11,80694	15,21	5,38632
13,94	12,86581	14,58	11,74515	15,22	5,25230
13,95	12,89244	14,59	11,68199	15,23	5,11745
13,96	12,91770	14,60	11,61748	15,24	4,98184
13,97	12,94165	14,61	11,55160	15,25	4,84544
13,98	12,96421	14,62	11,48442	15,26	4,70826
13,99	12,98541	14,63	11,41585	15,27	4,57034
14,00	13,00522	14,64	11,34598	15,28	4,43171
14,01	13,02369	14,65	11,27474	15,29	4,29231
14,02	13,04075	14,66	11,20220	15,30	4,15222
14,03	13,05645	14,67	11,12834	15,31	4,01144
14,04	13,07079	14,68	11,05319	15,32	3,86995

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
15,33	3,72780	15,97	—6,10281	16,61	—14,65205
15,34	3,58501	15,98	—6,25691	16,62	—14,75441
15,35	3,44154	15,99	—6,41065	16,63	—14,85550
15,36	3,29746	16,00	—6,56405	16,64	—14,95534
15,37	3,15276	16,01	—6,71711	16,65	—15,05391
15,38	3,00745	16,02	—6,86975	16,66	—15,15121
15,39	2,86156	16,03	—7,02202	16,67	—15,24720
15,40	2,71511	16,04	—7,17389	16,68	—15,34184
15,41	2,56805	16,05	—7,32531	16,69	—15,43522
15,42	2,42049	16,06	—7,47629	16,70	—15,52721
15,43	2,27236	16,07	—7,62681	16,71	—15,61790
15,44	2,12374	16,08	—7,77685	16,72	—15,70720
15,45	1,97460	16,09	—7,92640	16,73	—15,79516
15,46	1,82495	16,10	—8,07544	16,74	—15,88176
15,47	1,67484	16,11	—8,22395	16,75	—15,96695
15,48	1,52430	16,12	—8,37195	16,76	—16,05075
15,49	1,37326	16,13	—8,51936	16,77	—16,13314
15,50	1,22181	16,14	—9,66622	16,78	—16,21410
15,51	1,06994	16,15	—8,81251	16,79	—16,29365
15,52	0,91769	16,16	—8,95819	16,80	—16,37179
15,53	0,76502	16,17	—9,10325	16,81	—16,44846
15,54	0,61200	16,18	—9,24765	16,82	—16,52365
15,55	0,45862	16,19	—9,39145	16,83	—16,59740
15,56	0,30488	16,20	—9,53455	16,84	—16,66970
15,57	0,15080	16,21	—9,67701	16,85	—16,74050
15,58	—0,00355	16,22	—9,81874	16,86	—16,80981
15,59	—0,15821	16,23	—9,95980	16,87	—16,87761
15,60	—0,31318	16,24	—10,10010	16,88	—16,94391
15,61	—0,46840	16,25	—10,23970	16,89	—17,00869
15,62	—0,62386	16,26	—10,37851	16,90	—17,07195
15,63	—0,77959	16,27	—10,51660	16,91	—17,13365
15,64	—0,93550	16,28	—10,65385	16,92	—17,19386
15,65	—1,09164	16,29	—10,79036	16,93	—17,25249
15,66	—1,24799	16,30	—10,92600	16,94	—17,30954
15,67	—1,40450	16,31	—11,06085	16,95	—17,36506
15,68	—1,56114	16,32	—11,19485	16,96	—17,41902
15,69	—1,71795	16,33	—11,32801	16,97	—17,47136
15,70	—1,87491	16,34	—11,46029	16,98	—17,52215
15,71	—2,03196	16,35	—11,59168	16,99	—17,57131
15,72	—2,18910	16,36	—11,72215	17,00	—17,61811
15,73	—2,34631	16,37	—11,85175	17,01	—17,66488
15,74	—2,50362	16,38	—11,98040	17,02	—17,70924
15,75	—2,66094	16,39	—12,10811	17,03	—17,75198
15,76	—2,81832	16,40	—12,23485	17,04	—17,79310
15,77	—2,97571	16,41	—12,36065	17,05	—17,83258
15,78	—3,13310	16,42	—12,48545	17,06	—17,87041
15,79	—3,29050	16,43	—12,60926	17,07	—17,90661
15,80	—3,44786	16,44	—12,73205	17,08	—17,94118
15,81	—3,60514	16,45	—12,85382	17,09	—17,97406
15,82	—3,76241	16,46	—12,97455	17,10	—18,00532
15,83	—3,91955	16,47	—13,09421	17,11	—18,03489
15,84	—4,07665	16,48	—13,21284	17,12	—18,06279
15,85	—4,23361	16,49	—13,33038	17,13	—18,08902
15,86	—4,39045	16,50	—13,44681	17,14	—18,11355
15,87	—4,54715	16,51	—13,56214	17,15	—18,13641
15,88	—4,70369	16,52	—13,67639	17,16	—18,15761
15,89	—4,86005	16,53	—13,78949	17,17	—18,17709
15,90	—5,01621	16,54	—13,90142	17,18	—18,19488
15,91	—5,17220	16,55	—14,01222	17,19	—18,21095
15,92	—5,32795	16,56	—14,12184	17,20	—18,22536
15,93	—5,48345	16,57	—14,23031	17,21	—18,23802
15,94	—5,63871	16,58	—14,33754	17,22	—18,24901
15,95	—5,79372	16,59	—14,44362	17,23	—18,25824
15,96	—5,94840	16,60	—14,54845	17,24	—18,26580

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
17,25	-18,27160	17,89	-15,07691	18,53	-5,87178
17,26	-18,27570	17,90	-14,97350	18,54	-5,69551
17,27	-18,27810	17,91	-14,86856	18,55	-5,51861
17,28	-18,27875	17,92	-14,76211	18,56	-5,34106
17,29	-18,27765	17,93	-14,65415	18,57	-5,16285
17,30	-18,27484	17,94	-14,54474	18,58	-4,98408
17,31	-18,27030	17,95	-14,43382	18,59	-4,80470
17,32	-18,26405	17,96	-14,32144	18,60	-4,62474
17,33	-18,25604	17,97	-14,20761	18,61	-4,44421
17,34	-18,24630	17,98	-14,09235	18,62	-4,26316
17,35	-18,23482	17,99	-13,97562	18,63	-4,08160
17,36	-18,22160	18,00	-13,85719	18,64	-3,89951
17,37	-18,20664	18,01	-13,73790	18,65	-3,71694
17,38	-18,18995	18,02	-13,61695	18,66	-3,53391
17,39	-18,17151	18,03	-13,49459	18,67	-3,35046
17,40	-18,15132	18,04	-13,37081	18,68	-3,16654
17,41	-18,12940	18,05	-13,24570	18,69	-2,98222
17,42	-18,10575	18,06	-13,11921	18,70	-2,79750
17,43	-18,08038	18,07	-12,99134	18,71	-2,61240
17,44	-18,05325	18,08	-12,86216	18,72	-2,42694
17,45	-18,02438	18,09	-12,73164	18,73	-2,24114
17,46	-17,99378	18,10	-12,59981	18,74	-2,05500
17,47	-17,96144	18,11	-12,46668	18,75	-1,86859
17,48	-17,92735	18,12	-12,33225	18,76	-1,68188
17,49	-17,89154	18,13	-12,19651	18,77	-1,49491
17,50	-17,85401	18,14	-12,05954	18,78	-1,30766
17,51	-17,81474	18,15	-11,92130	18,79	-1,12020
17,52	-17,77375	18,16	-11,78181	18,80	-0,93255
17,53	-17,73105	18,17	-11,64108	18,81	-0,74469
17,54	-17,68661	18,18	-11,49914	18,82	-0,55665
17,55	-17,64045	18,19	-11,35599	18,83	-0,36844
17,56	-17,59255	18,20	-11,21165	18,84	-0,18011
17,57	-17,54296	18,21	-11,06610	18,85	0,00832
17,58	-17,49165	18,22	-10,91941	18,86	0,19684
17,59	-17,43866	18,23	-10,77159	18,87	0,38549
17,60	-17,38392	18,24	-10,62260	18,88	0,57416
17,61	-17,32752	18,25	-10,47249	18,89	0,76291
17,62	-17,26940	18,26	-10,32125	18,90	0,95164
17,63	-17,20958	18,27	-10,16895	18,91	1,14040
17,64	-17,14808	18,28	-10,01554	18,92	1,32914
17,65	-17,08490	18,29	-9,86105	18,93	1,51786
17,66	-17,02001	18,30	-9,70552	18,94	1,70651
17,67	-16,95348	18,31	-9,54894	18,95	1,89510
17,68	-16,88525	18,32	-9,39134	18,96	2,08362
17,69	-16,81538	18,33	-9,23275	18,97	2,27200
17,70	-16,74382	18,34	-9,07315	18,98	2,46024
17,71	-16,67062	18,35	-8,91256	18,99	2,64835
17,72	-16,59579	18,36	-8,75100	19,00	2,83632
17,73	-16,51929	18,37	-8,58849	19,01	3,02406
17,74	-16,44116	18,38	-8,42505	19,02	3,21161
17,75	-16,36139	18,39	-8,26068	19,03	3,39896
17,76	-16,28000	18,40	-8,09542	19,04	3,58604
17,77	-16,19696	18,41	-7,92926	19,05	3,77284
17,78	-16,11234	18,42	-7,76220	19,06	3,95941
17,79	-16,02611	18,43	-7,59431	19,07	4,14565
17,80	-15,93825	18,44	-7,42560	19,08	4,33155
17,81	-15,84882	18,45	-7,25602	19,09	4,51716
17,82	-15,75780	18,46	-7,08565	19,10	4,70238
17,83	-15,66520	18,47	-6,91450	19,11	4,88721
17,84	-15,57106	18,48	-6,74254	19,12	5,07169
17,85	-15,47531	18,49	-6,56984	19,13	5,25571
17,86	-15,37802	18,50	-6,39642	19,14	5,43931
17,87	-15,27920	18,51	-6,22224	19,15	5,62240
17,88	-15,17881	18,52	-6,04734	19,16	5,80515

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
19,17	5,98734	19,81	15,80635	20,45	19,41135
19,18	6,16905	19,82	15,91911	20,46	19,40429
19,19	6,35020	19,83	16,03029	20,47	19,39516
19,20	6,53082	19,84	16,13986	20,48	19,38395
19,21	6,71086	19,85	16,24786	20,49	19,37074
19,22	6,89009	19,86	16,35420	20,50	19,35546
19,23	7,06916	19,87	16,45894	20,51	19,33810
19,24	7,24742	19,88	16,56206	20,52	19,31871
19,25	7,42501	19,89	16,66350	20,53	19,29729
19,26	7,60195	19,90	16,76326	20,54	19,27380
19,27	7,77821	19,91	16,86136	20,55	19,24824
19,28	7,95377	19,92	16,95779	20,56	19,22065
19,29	8,12861	19,93	17,05260	20,57	19,19100
19,30	8,30276	19,94	17,14550	20,58	19,15931
19,31	8,47611	19,95	17,23676	20,59	19,12560
19,32	8,64871	19,96	17,32630	20,60	19,08981
19,33	8,82054	19,97	17,41411	20,61	19,05196
19,34	8,99156	19,98	17,50015	20,62	19,01211
19,35	9,16174	19,99	17,58446	20,63	18,97019
19,36	9,33109	20,00	17,66694	20,64	18,92624
19,37	9,49958	20,01	17,74769	20,65	18,88025
19,38	9,66720	20,02	17,82662	20,66	18,83221
19,39	9,83391	20,03	17,90372	20,67	18,78216
19,40	9,99970	20,04	17,97905	20,68	18,73010
19,41	10,16460	20,05	18,05251	20,69	18,67599
19,42	10,32851	20,06	18,12418	20,70	18,61984
19,43	10,49149	20,07	18,19400	20,71	18,56170
19,44	10,65346	20,08	18,26196	20,72	18,50155
19,45	10,81444	20,09	18,32806	20,73	18,43940
19,46	10,97441	20,10	18,39229	20,74	18,37521
19,47	11,13334	20,11	18,45464	20,75	18,30904
19,48	11,29125	20,12	18,51512	20,76	18,24089
19,49	11,44805	20,13	18,57370	20,77	18,17072
19,50	11,60380	20,14	18,63036	20,78	18,09860
19,51	11,75841	20,15	18,68515	20,79	18,02445
19,52	11,91194	20,16	18,73800	20,80	17,94835
19,53	12,06430	20,17	18,78892	20,81	17,87031
19,54	12,21555	20,18	18,83794	20,82	17,79026
19,55	12,36561	20,19	18,88501	20,83	17,70829
19,56	12,51448	20,20	18,93012	20,84	17,62436
19,57	12,66214	20,21	18,97331	20,85	17,53846
19,58	12,80860	20,22	19,01452	20,86	17,45065
19,59	12,95385	20,23	19,05380	20,87	17,36091
19,60	13,09781	20,24	19,09109	20,88	17,26924
19,61	13,24055	20,25	19,12641	20,89	17,17565
19,62	13,38199	20,26	19,15975	20,90	17,08016
19,63	13,52211	20,27	19,19110	20,91	16,98274
19,64	13,66095	20,28	19,22045	20,98	16,88346
19,65	13,79845	20,29	19,24784	20,93	16,78231
19,66	13,93464	20,30	19,27322	20,94	16,67926
19,67	14,06946	20,31	19,29659	20,95	16,57434
19,68	14,20290	20,32	19,31795	20,96	16,46755
19,69	14,33495	20,33	19,33730	20,97	16,35895
19,70	14,46561	20,34	19,35462	20,98	16,24849
19,71	14,59485	20,35	19,36995	20,99	16,13619
19,72	14,72264	20,36	19,38324	21,00	16,02206
19,73	14,84900	20,37	19,39457	21,01	15,90615
19,74	14,97394	20,38	19,40375	21,02	15,78840
19,75	15,09738	20,39	19,41095	21,03	15,66890
19,76	15,21932	20,40	19,41611	21,04	15,54760
19,77	15,33979	20,41	19,41923	21,05	15,42451
19,78	15,45872	20,42	19,42035	21,06	15,29970
19,79	15,57615	20,43	19,41941	21,07	15,17311
19,80	15,69201	20,44	19,41641	21,08	15,04479

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
21,09	14,91474	21,73	3,64445	22,37	-10,20265
21,10	14,78298	21,74	3,43419	22,38	-10,41011
21,11	14,64952	21,75	3,22330	22,39	-10,61680
21,12	14,51436	21,76	3,01179	22,40	-10,82276
21,13	14,37752	21,77	2,79968	22,41	-11,02789
21,14	14,23801	21,78	2,58700	22,42	-11,23221
21,15	14,09885	21,79	2,37374	22,43	-11,43568
21,16	13,95702	21,80	2,15999	22,44	-11,63829
21,17	13,81360	21,81	1,94571	22,45	-11,84002
21,18	13,66855	21,82	1,73092	22,46	-12,04084
21,19	13,52189	21,83	1,51569	22,47	-12,24072
21,20	13,37362	21,84	1,30000	22,48	-12,43969
21,21	13,22381	21,85	1,08388	22,49	-12,63765
21,22	13,07242	21,86	0,86736	22,50	-12,83465
21,23	13,91945	21,87	0,65044	22,51	-13,03065
21,24	12,76499	21,88	0,43315	22,52	-13,22561
21,25	12,60899	21,89	0,21555	22,53	-13,41952
21,26	12,45148	21,90	-0,00239	22,54	-13,61235
21,27	12,29245	21,91	-0,22060	22,55	-13,80410
21,28	12,13199	21,92	-0,43912	22,56	-13,99471
21,29	11,97004	21,93	-0,65791	22,57	-14,18422
21,30	11,80664	21,94	-0,87691	22,58	-14,37259
21,31	11,64181	21,95	-1,09610	22,59	-14,55975
21,32	11,47555	21,96	-1,31551	22,60	-14,74574
21,33	11,30790	21,97	-1,53510	22,61	-14,93055
21,34	11,13885	21,98	-1,75480	22,62	-15,11409
21,35	10,96841	21,99	-1,97465	22,63	-15,29640
21,36	10,79665	22,00	-2,19462	22,64	-15,47741
21,37	10,62352	22,01	-2,41464	22,65	-15,65715
21,38	10,44909	22,02	-2,63471	22,66	-15,83561
21,39	10,27334	22,03	-2,85485	22,67	-16,01272
21,40	10,09630	22,04	-3,07499	22,68	-16,18848
21,41	9,91798	22,05	-3,29510	22,69	-16,36288
21,42	9,73840	22,06	-3,51520	22,70	-16,53589
21,43	9,55758	22,07	-3,73525	22,71	-16,70751
21,44	9,37552	22,08	-3,95524	22,72	-16,87771
21,45	9,19228	22,09	-4,17512	22,73	-17,04644
21,46	9,00784	22,10	-4,39486	22,74	-17,21374
21,47	8,82220	22,11	-4,61450	22,75	-17,37959
21,48	8,63545	22,12	-4,83395	22,76	-17,54392
21,49	8,44754	22,13	-5,05320	22,77	-17,70672
21,50	8,25851	22,14	-5,27228	22,78	-17,86801
21,51	8,06836	22,15	-5,49112	22,79	-18,02776
21,52	7,87716	22,16	-5,70970	22,80	-18,18594
21,53	7,68486	22,17	-5,92801	22,81	-18,34254
21,54	7,49155	22,18	-6,14602	22,82	-18,49755
21,55	7,29719	22,19	-6,36371	22,83	-18,65096
21,56	7,10182	22,20	-6,58105	22,84	-18,80272
21,57	6,90545	22,21	-6,79806	22,85	-18,95281
21,58	6,70812	22,22	-7,01464	22,86	-19,10125
21,59	6,50981	22,23	-7,23084	22,87	-19,24802
21,60	6,31060	22,24	-7,44662	22,88	-19,39311
21,61	6,11044	22,25	-7,66196	22,89	-19,53644
21,62	5,90941	22,26	-7,87680	22,90	-19,67809
21,63	5,70751	22,27	-8,09116	22,91	-19,81795
21,64	5,50474	22,28	-8,30499	22,92	-19,95608
21,65	5,30111	22,29	-8,51822	22,93	-20,09241
21,66	5,09670	22,30	-8,73100	22,94	-20,22699
21,67	4,89145	22,31	-8,94315	22,95	-20,35972
21,68	4,68545	22,32	-9,15471	22,96	-20,49064
21,69	4,47870	22,33	-9,36565	22,97	-20,61975
21,70	4,27120	22,34	-9,57591	22,98	-20,74699
21,71	4,06295	22,35	-9,78551	22,99	-20,87234
21,72	3,85405	22,36	-9,99444	23,00	-20,99584

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
23,01	-21,11745	23,65	-24,47044	24,56	-13,46964
23,02	-21,23714	23,66	-24,44844	24,60	-12,63291
23,03	-21,35492	23,67	-24,42412	24,64	-11,77481
23,04	-21,47078	23,68	-24,39741	24,68	-10,89665
23,05	-21,58466	23,69	-24,36832	24,72	-9,99980
23,06	-21,69661	23,70	-24,33690	24,76	-9,08561
23,07	-21,80655	23,71	-24,30311	24,80	-8,15550
23,08	-21,91455	23,72	-24,26696	24,84	-7,21090
23,09	-22,02050	23,73	-24,22844	24,88	-6,25334
23,10	-22,12448	23,74	-24,18755	24,92	-5,28424
23,11	-22,22641	23,75	-24,14435	24,96	-4,30520
23,12	-22,32631	23,76	-24,09876	25,00	-3,31738
23,13	-22,42419	23,77	-24,05085	25,04	-2,32332
23,14	-22,51999	23,78	-24,00058	25,08	-1,32362
23,15	-22,61370	23,79	-23,94795	25,12	-0,32074
23,16	-22,70535	23,80	-23,89301	25,16	0,68523
23,17	-22,79491	23,81	-23,83570	25,20	1,69125
23,18	-22,88238	23,82	-23,77610	25,24	2,69615
23,19	-22,96770	23,83	-23,71415	25,28	3,69831
23,20	-23,05092	23,84	-23,64985	25,32	4,69614
23,21	-23,13200	23,85	-23,58386	25,36	5,68798
23,22	-23,21096	23,86	-23,51435	25,40	6,67224
23,23	-23,28774	23,87	-23,44314	25,44	7,64731
23,24	-23,36233	23,88	-23,36962	25,48	8,60564
23,25	-23,43481	23,89	-23,29379	25,52	9,56351
23,26	-23,50505	23,90	-23,21565	25,56	10,50150
23,27	-23,57314	23,91	-23,13525	25,60	11,42399
23,28	-23,63900	23,92	-23,05256	25,64	12,32945
23,29	-23,70269	23,93	-22,96761	25,68	13,21640
23,30	-23,76412	23,94	-22,88037	25,72	14,08334
23,31	-23,82334	23,95	-22,79089	25,76	14,92880
23,32	-23,88035	23,96	-22,66912	25,80	15,75138
23,33	-23,93510	23,97	-22,60512	25,84	16,54494
23,34	-23,98761	23,98	-22,50890	25,88	17,32235
23,35	-24,03784	23,99	-22,41041	25,92	18,06795
23,36	-24,08585	24,00	-22,30974	25,96	18,78550
23,37	-24,13155	24,01	-22,20681	26,00	19,47371
23,38	-24,17501	24,02	-22,10172	26,04	20,13061
23,39	-24,21616	24,03	-21,99440	26,08	20,75606
23,40	-24,25505	24,04	-21,88490	26,12	21,34855
23,41	-24,29162	24,05	-21,77321	26,16	21,90705
23,42	-24,32592	24,06	-21,65936	26,20	22,43056
23,43	-24,35790	24,07	-21,54334	26,24	22,91811
23,44	-24,38755	24,08	-21,42515	26,28	23,36884
23,45	-24,41490	24,09	-21,30484	26,32	23,77966
23,46	-24,43994	24,10	-21,18242	26,36	24,15654
23,47	-24,46266	24,11	-21,05786	26,40	24,49199
23,48	-24,48301	24,12	-20,93117	26,44	24,78762
23,49	-24,50111	24,13	-20,80241	26,48	25,04282
23,50	-24,51681	24,14	-20,67155	26,52	25,25705
23,51	-24,53021	24,15	-20,53862	26,56	25,42989
23,52	-24,54125	24,16	-20,40362	26,60	25,56090
23,53	-24,54992	24,17	-20,26654	26,64	25,64975
23,54	-24,55626	24,18	-20,12745	26,68	25,69615
23,55	-24,56025	24,19	-19,98635	26,72	25,69990
23,56	-24,56190	24,20	-19,84990	26,76	25,66091
23,57	-24,56118	24,24	-19,25076	26,80	25,57915
23,58	-24,55811	24,28	-18,62709	26,84	25,45445
23,59	-24,55265	24,32	-17,97311	26,88	25,28706
23,60	-24,54485	24,36	-17,28980	26,92	25,07705
23,61	-24,53472	24,40	-16,57811	26,96	24,82460
23,62	-24,52219	24,44	-15,83914	27,00	24,53005
23,63	-24,50731	24,48	-15,07399	27,04	24,19375
23,64	-24,49006	24,52	-14,28374	27,08	23,81601

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
27,12	23,39744	29,68	-30,44065	32,24	23,34066
27,16	22,93855	29,72	-30,61245	32,28	24,19795
27,20	22,43995	29,76	-30,73725	32,32	25,01706
27,24	21,90235	29,80	-30,81475	32,36	25,79650
27,28	21,32646	29,84	-30,84475	32,40	26,53494
27,32	20,71310	29,88	-30,82698	32,44	27,23111
27,36	20,06316	29,92	-30,76135	32,48	27,88378
27,40	19,37755	29,96	-30,64894	32,52	28,49179
27,44	18,65730	30,00	-30,48675	32,56	29,05404
27,48	17,90048	30,04	-30,27781	32,60	29,56958
27,52	17,11714	30,08	-30,02145	32,64	30,03740
27,56	16,29950	30,12	-29,72023	32,68	30,45665
27,60	15,45179	30,16	-29,36760	32,72	30,82654
27,64	14,57525	30,20	-28,97088	32,76	31,14634
27,68	13,67120	30,24	-28,52839	32,80	31,41546
27,72	12,74102	30,28	-28,04045	32,84	31,63330
27,76	11,78215	30,32	-27,50852	32,88	31,79942
27,80	10,80804	30,36	-26,93170	32,92	31,91341
27,84	9,80822	30,40	-26,31232	32,96	31,97495
27,88	8,78818	30,44	-25,65076	33,00	31,98380
27,92	7,74951	30,48	-24,94795	33,04	31,93988
27,96	6,69389	30,52	-24,20495	33,08	31,84305
28,00	5,62285	30,56	-23,42285	33,12	31,69341
28,04	4,53822	30,60	-22,60274	33,16	31,49196
28,08	3,44155	30,64	-21,74590	33,20	31,23615
28,12	2,33468	30,68	-20,85361	33,24	30,92900
28,16	1,21930	30,72	-19,92714	33,28	30,56995
28,20	0,09715	30,76	-18,96798	33,32	30,15951
28,24	-1,02985	30,80	-17,97750	33,36	29,69814
28,28	-2,16008	30,84	-16,95729	33,40	29,18651
28,32	-3,29161	30,88	-15,90885	33,44	28,62530
28,36	-4,42676	30,92	-14,83380	33,48	28,01529
28,40	-5,55151	30,96	-13,73381	33,52	27,35735
28,44	-6,67619	31,00	-12,61058	33,56	26,65240
28,48	-7,79495	31,04	-11,46585	33,60	25,90152
28,52	-8,90595	31,08	-10,30139	33,64	25,10571
28,56	-10,00745	31,12	-9,11904	33,68	24,26624
28,60	-11,09759	31,16	-7,92062	33,72	23,38428
28,64	-12,17460	31,20	-6,70805	33,76	22,46116
28,68	-13,23670	31,24	-5,48324	33,80	21,49830
28,72	-14,28221	31,28	-4,24810	33,84	20,49711
28,76	-15,30932	31,32	-3,00458	33,88	19,45912
28,80	-16,31640	31,36	-1,75466	33,92	18,38590
28,84	-17,30171	31,40	-0,50035	33,96	17,27910
28,88	-18,26365	31,44	0,75631	34,00	16,14042
28,92	-19,20061	31,48	2,01341	34,04	14,97160
28,96	-20,11101	31,52	3,26889	34,08	13,77444
29,00	-20,99331	31,56	4,52071	34,12	12,55081
29,04	-21,84604	31,60	5,76684	34,16	11,30260
29,08	-22,66775	31,64	7,00532	34,20	10,03174
29,12	-23,45691	31,68	8,23412	34,24	8,74021
29,16	-24,21234	31,72	9,45122	34,28	7,43016
29,20	-24,93264	31,76	10,65465	34,32	6,10351
29,24	-25,61658	31,80	11,84245	34,36	4,76235
29,28	-26,26294	31,84	13,01265	34,40	3,40885
29,32	-26,87268	31,88	14,16339	34,44	2,04516
29,36	-27,43851	31,92	15,29271	34,48	0,67340
29,40	-27,96560	31,96	16,39875	34,52	-0,70420
29,44	-28,45095	32,00	17,47975	34,56	-2,08550
29,48	-28,89362	32,04	18,53380	34,60	-3,46826
29,52	-29,29285	32,08	19,55921	34,64	-4,85028
29,56	-29,64774	32,12	20,55425	34,68	-6,22932
29,60	-29,95778	32,16	21,51724	34,72	-7,60314
29,64	-30,22225	32,20	22,44655	34,76	-8,96960

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
34,80	-10,32640	37,36	-12,48496	39,92	30,17235
34,84	-11,67141	37,40	-11,06534	39,96	29,18022
34,88	-13,00241	37,44	-9,62658	40,00	28,13778
34,92	-14,31725	37,48	-8,17091	40,04	27,04659
34,96	-15,61380	37,52	-6,70065	40,08	25,90830
35,00	-16,88989	37,56	-5,21812	40,12	24,72462
35,04	-18,14345	37,60	-3,72565	40,16	23,49740
34,08	-19,37240	37,64	-2,22565	40,20	22,22851
35,12	-20,57473	37,68	-0,72051	40,24	20,91991
35,16	-21,74851	37,72	0,78735	40,28	19,57359
35,20	-22,89170	37,76	2,29761	40,32	18,19164
35,24	-24,00242	37,80	3,80175	40,36	16,77622
35,28	-25,07880	37,84	5,30341	40,40	15,32952
35,32	-26,11911	37,88	6,79815	40,44	13,85380
35,36	-27,12150	37,92	8,28355	40,48	12,35136
35,40	-28,08435	37,96	9,75725	40,52	10,82460
35,44	-29,00602	38,00	11,21685	40,56	9,27585
35,48	-29,88490	38,04	12,65991	40,60	7,70761
35,52	-30,71950	38,08	14,08415	40,64	6,12235
35,56	-31,50836	38,12	15,48721	40,68	4,52252
35,60	-32,25015	38,16	16,86685	40,72	2,91071
35,64	-32,94359	38,20	18,22075	40,76	1,28950
35,68	-33,58740	38,24	19,54671	40,80	-0,33859
35,72	-34,18045	38,28	20,84255	40,84	-1,97091
35,76	-34,72171	38,32	22,10611	40,88	-3,60491
35,80	-35,21019	38,36	23,33535	40,92	-5,23791
35,84	-35,64495	38,40	24,52811	40,96	-6,86736
35,88	-36,02520	38,44	25,68251	41,00	-8,49055
35,92	-36,35020	38,48	26,79658	41,04	-10,10494
35,96	-36,61932	38,52	27,86845	41,08	-11,70790
36,00	-36,83199	38,56	28,89632	41,12	-13,29686
36,04	-36,98771	38,60	29,87845	41,16	-14,86920
36,08	-37,08619	38,64	30,81319	41,20	-16,42239
36,12	-37,12705	38,68	31,69890	41,24	-17,95390
36,16	-37,11018	38,72	32,53408	41,28	-19,46124
36,20	-37,03545	38,76	33,31728	41,32	-20,94194
36,24	-36,90280	38,80	34,04715	41,36	-22,39356
36,28	-36,71234	38,84	34,72240	41,40	-23,81374
36,32	-36,46431	38,88	35,34181	41,44	-25,20010
36,36	-36,15892	38,92	35,90432	41,48	-26,55049
36,40	-35,79655	38,96	36,40890	41,52	-27,86251
36,44	-35,37766	39,00	36,85460	41,56	-29,13465
36,48	-34,90230	39,04	37,24058	41,60	-30,36298
36,52	-34,37259	39,08	37,56611	41,64	-31,54724
36,56	-33,76775	39,12	37,83055	41,68	-32,68490
36,60	-33,14916	39,16	38,03336	41,72	-33,77399
36,64	-32,45766	39,20	38,17409	41,76	-34,81269
36,68	-31,71425	39,24	38,25235	41,80	-35,79921
36,72	-30,92004	39,28	38,26792	41,84	-36,73194
36,76	-30,07621	39,32	38,22061	41,88	-37,60922
36,80	-29,18395	39,36	38,11042	41,92	-38,42955
36,84	-28,24461	39,40	37,93739	41,96	-39,19151
36,88	-27,25960	39,44	37,70161	42,00	-39,89275
36,92	-26,23039	39,48	37,40342	42,04	-40,53509
36,96	-25,15855	39,52	37,04310	42,08	-41,11432
37,00	-24,04569	39,56	36,62112	42,12	-41,63041
37,04	-22,89351	39,60	36,13804	42,16	-42,08241
37,08	-21,70378	39,64	35,59455	42,20	-42,46950
37,12	-20,47830	39,68	34,99131	42,24	-42,79094
37,16	-19,21901	39,72	34,32925	42,28	-43,04605
37,20	-17,92784	39,76	33,60925	42,32	-43,23431
37,24	-16,60674	39,80	32,83241	42,36	-43,35530
37,28	-15,25785	39,84	31,99981	42,40	-43,40870
37,32	-13,88320	39,88	31,11269	42,44	-43,39429

y	$\omega(y)$	y	$\omega(y)$	y	$\omega(y)$
42,48	-43,31194	44,36	16,28854	46,24	34,11940
42,52	-43,16171	44,40	17,92509	46,28	32,91768
42,56	-42,94370	44,44	19,53426	46,32	31,65956
42,60	-42,65809	44,48	21,11849	46,36	30,94700
42,64	-42,30524	44,52	22,66012	46,40	28,98195
42,68	-41,88559	44,56	24,17168	46,44	27,56656
42,72	-41,39968	44,60	25,64562	46,48	26,10380
42,76	-40,84815	44,64	27,07955	46,52	24,59361
42,80	-40,23182	44,68	28,47112	46,56	23,04044
42,84	-39,55149	44,72	29,81795	46,60	21,44625
42,88	-38,80814	44,76	31,11788	46,64	19,81330
42,92	-38,00290	44,80	32,36869	46,68	18,14426
42,96	-37,13687	44,84	33,56831	46,72	16,14170
43,00	-36,21139	44,88	34,71472	46,76	14,70830
43,04	-35,22779	44,92	35,80599	46,80	12,94678
43,08	-34,18755	44,96	36,84024	46,84	11,15992
43,12	-33,09224	45,00	37,81579	46,88	9,35051
43,16	-31,94350	45,04	38,73091	46,92	7,52145
43,20	-30,74309	45,08	39,58401	46,96	5,67565
43,24	-29,49280	45,12	40,37368	47,00	3,81600
43,28	-28,19461	45,16	41,09849	47,04	1,94545
43,32	-26,85046	45,20	41,75716	47,08	0,06705
43,36	-25,46224	45,24	42,34855	47,12	-1,81631
43,40	-24,03266	45,28	42,87159	47,16	-3,70151
43,44	-22,56335	45,32	43,32530	47,20	-5,58501
43,48	-21,05685	45,36	43,70881	47,24	-7,46559
43,52	-19,51541	45,40	44,02145	47,28	-9,33835
43,56	-17,94151	45,44	44,26252	47,32	-11,20100
43,60	-16,33761	45,48	44,43155	47,36	-13,05041
43,64	-14,70619	45,52	44,52816	47,40	-14,88369
43,68	-13,04980	45,56	44,55201	47,44	-16,69780
43,72	-11,37111	45,60	44,50298	47,48	-18,48988
43,76	-9,67275	45,64	44,38100	47,52	-20,25696
43,80	-7,95736	45,68	44,18612	47,56	-21,99658
43,84	-6,22771	45,72	43,91859	47,60	-23,70475
43,88	-4,48655	45,76	43,57864	47,64	-25,37974
43,92	-2,73661	45,80	43,16670	47,68	-27,01855
43,96	-0,98070	45,84	42,68334	47,72	-28,61850
44,00	0,77836	45,88	42,12920	47,76	-30,17669
44,04	2,53781	45,92	41,49950	47,80	-31,69120
44,08	4,29475	45,96	40,81171	47,84	-33,15886
44,12	6,04645	46,00	40,05066	47,88	-34,57750
44,16	7,79001	46,04	39,22171	47,92	-35,94478
44,20	9,52269	46,08	38,32734	47,96	-37,25835
44,24	11,24162	46,12	37,36845	48,00	-38,51610
44,28	12,94410	46,16	36,34645		
44,32	14,62731	46,20	35,26291		

Translated for the National Aeronautics and Space Administration
by John F. Holman and Co. Inc.

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